



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/797,449

03/10/2004

Thomas A. Osborne

1-37213

4445

42715 7590 08/22/2007  
DUNLAP, CODDING & ROGERS, P.C.  
P.O. BOX 16370  
OKLAHOMA CITY, OK 73113

EXAMINER

MILLER, CHERYL L

ART UNIT

PAPER NUMBER

3738

MAIL DATE

DELIVERY MODE

08/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/797,449

Applicant(s)

OSBORNE ET AL.

Examiner

Cheryl Miller

Art Unit

3738

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 12 and 16-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9, 11, 13-15 is/are rejected.
- 7) ☒ Claim(s) 7, 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 6, 2007 has been entered.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-11 and 13-15 are have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 13-15 are rejected under 35 U.S.C. 102(e) as being anticipated by McGuckin Jr. et al. (US 6,676,698 B2, cited in IDS). McGuckin discloses an implantable medical device (see figs.41A, 41B) comprising an expandable support frame (D) and at least one leaflet (560) attached to the frame and at least partially defining a valve orifice (near 566) that regulates flow, the leaflet made of a bioremodelable material (col.18, lines 20-23) and movable between two

positions, wherein the frame and leaflet cooperatively define an opening (562) that permits a controlled amount of fluid to flow in a second direction, the opening (562) spaced axially from orifice (566).

Claims 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Snyders (US 2002/0123802 A1). Snyders discloses an implantable medical device (see figs.8-15) comprising an expandable support frame (220) and at least one leaflet (257) attached to the frame and at least partially defining a valve orifice (near 240, see fig.8, 9) that regulates flow, the leaflet made of a bioremodelable material (P0043) and movable between two positions (fig.8, 9), wherein the frame (220) and leaflet (257) cooperatively define an opening (212) that permits a controlled amount of fluid to flow in a second direction (P0058), the opening (212) spaced axially from orifice (near 240).

Claims 1-3 and 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Shaolian et al. (US 2003/0055492 A1). See figures 1-4. Shaolian discloses an implantable medical device comprising an expandable support frame (44) and at least one leaflet (42) at least partially defining a valve orifice (seen at top of 42 in fig.3) being movable between two positions (closed in fig.2, open in fig.3), a first edge attached to the frame (at 68, 70) and second edge unattached (all other portions of periphery are unattached), wherein a portion of the second edge and frame (44) define an opening (bottom of 42 in fig.3; disclosed to minimize retrograde flow, therefore, some flow exists; P0064), the opening (at bottom of leaflet) spaced axially from orifice (at top of leaflet, see fig.2a, 3). Shaolian discloses a self-expanding frame (P0051). Shaolian has shown the opening (bottom of leaflet) to open less than 25 percent about (fig.3).

Claims 1, 2, 4, 5, 9, 10, 13, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Baykut (US 4,787,901). Baykut discloses a medical device (see figs) comprising an expandable frame (3) and at least one leaflet (2) defining a valve orifice (top of frame3, where 7 moves to open and close), the leaflet having first and second edges and is movable, the first edge attached to the frame (at 6, see fig.1) and second edge being free (bottom of 2, seen clearly in fig.9, 10), wherein a portion of the frame (3) and second edge (bottom edge of 2) form an opening (seen in figs.9, 10 below stitching of 2 to vessel), the opening (bottom of 2) is axially spaced from orifice (top of 3). Baykut's frame (3) is self-expandable (flexible materials capable of being compressed/folded and expanded), the leaflet (2) is bioremodelable (biological materials, col.5, lines 30-40).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaolian et al. (US 2003/0055492 A1). Shaolian discloses a valve leaflet made of PTFE (P0059) and does not disclose the leaflets to be made of bioremodelable material such as submucosa. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the leaflets formed of such bioremodelable material since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin* 125 USPQ 416.

***Allowable Subject Matter***

Claims 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Miller whose telephone number is (571) 272-4755. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

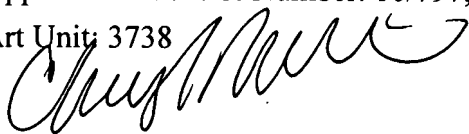
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine McDermott can be reached on (571) 272-4755. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/797,449

Page 6

Art Unit: 3738



Cheryl Miller



ANH TUAN T. NGUYEN  
SUPERVISORY PATENT EXAMINER

8/29/07